Bachelor of Engineering in

Decision Analytics

Alumni Sharing

Quentin Tsui
(BEng IEEM, 2015)
Investment Banking Associate, Morgan Stanley

"IEDA trained me to tackle challenging tasks in the fast-paced yet exciting corporate environment. These included: 1) thorough attention to detail and sensitivity to numbers; 2) the ability to raise critical questions; 3) to communicate efficiently and professionally; 4) the ability to learn fast; 5) a comprehensive knowledge of business optimization and finally 6) an entrepreneurial mindset for new solutions."

Summer Cho
(BEng IEEM, 2016)
Analyst, Securities Lending and Borrowing Operations, Goldman Sachs

"Studying industrial engineering at HKUST was a great experience for me. Our department has very supportive and connected faculty members. Courses offered are fully focused on students' needs and industry trends. Also, all the knowledge and experience I gained from my study, especially the financial engineering concept and analytical thinking mindset, really helped me a lot during interview and job searching process. I had two internships in UBS and Goldman Sachs and got a return offer from Goldman. I really enjoyed studying industrial engineering."

Yang Yang
(BEng IELM, 2010)
Quantitative Researcher, Cubist Systematic Strategies, New York

"4 years study with IE Department has equipped me with strong analytics skills and passion to apply sophisticated mathematical and engineering tools in solving problems and making impact in financial industry. Professors here share not only knowledge but also mindset on advancing the field. The department provides valuable opportunities including overseas exchange program, leading to my final decision to pursue further study at Stanford. I always feel lucky and grateful on the days spent here at IE."

Department of Industrial Engineering and Decision Analytics
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Industrial Engineering and Decision Analytics (IEDA) is the modern discipline of scientific management - it is the engineering of

Making Smart Decisions

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The Hong Kong economy has been gradually shifting from manufacturing to a service industry based economy and is now transforming towards one that is increasingly knowledge-based. In response to both industry and society requirements, and to continue our best efforts in providing world-class tertiary education in the field of Industrial Engineering, we offer a new UG Program on **Decision Analytics**. Our new program and courses are designed to train our graduates for high impact jobs in forward looking companies. The techniques for collecting and organizing real-world data, analyzing it intelligently, and using it to drive decision making models are central to our program.

BEng in Decision Analytics

BEng in Decision Analytics places a great emphasis in **predictive** and **prescriptive** analytical tools, statistical models, machine learning algorithms, simulation, and creative modeling – which make it more in line with the modern economy. Building upon this foundation of techniques, you will learn domain specific knowledge in areas ranging from financial engineering, consulting services, risk-management, supply and demand analytics, e-commerce, revenue optimization, health-care analytics, and even sports analytics.
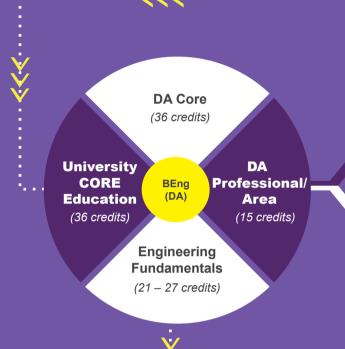
Bright Career Prospects

Our graduates will possess strong analytical skills as well as the ability to build and fit models that are consistent with data, develop algorithms, simulate models, and design process and system innovations seeking optimal solutions to important decision problems in domain specific areas. The transferable skills they have acquired enable them to source high-value added jobs in banks, insurance companies, consulting firms, e-commerce, the travel and leisure industry and health-care organizations in addition to working on complex issues arising in advanced manufacturing processes that also require decision analytics.

Industrial Engineers -

Making Smart Decisions

BEng in Decision Analytics (DA)

DA Core (36 credits)

University CORE Education (36 credits)

DA Professional/ Area (15 credits)

BEng (DA)

Engineering Fundamentals (21 – 27 credits)

Financial Engineering (FE) Area

- Data-Driven Portfolio Optimization
- Engineering Foundations of FinTech
- Financial Service Operations Management
- Introduction to FE
- Numerical Methods for FE
- Quantitative Methods in FE
- Systems Risk Management

or

Consulting Services (CS) Area

- Data Driven Supply Chain Management
- Demand and Supply Analytics
- Dynamic Pricing and Revenue Optimization
- E-Commerce Technology and Applications
- Integrated Production Systems
- Service Engineering and Management

* You can declare your areas (FE or CS) any time after you join IEDA

Program Features

➤ **Top engineering school** in Hong Kong *(QS World University Rankings by Subject 2020)*

➤ State-of-the-art and **flexible curriculum**

➤ To be accredited by the **Hong Kong Institution of Engineers (HKIE)**

Minors (18 Credits)
Business, IT, Entrepreneurship, …

Industry-sponsored Projects
With Cathay Pacific, Li & Fung, Towngas, …

Internships
Many partner companies

Exchange
USA, Europe, Singapore,…

Local Networking, Global Exposure

Exciting Career Opportunities

Mentorship Program

Keep abreast of the industry trends and expand your professional network by getting in touch with successful industry leaders and IEDA alumni!

International Exchange Program

Gain international exposure and broaden your horizons by taking part in the School of Engineering Exchange Program where you have chance to study in one of the top-notch engineering institutes across the globe.

Internship Program

Earn practical working experience and better pave your career path by working as a summer intern or one-year placement in sizable companies.

Competitions

Sign up for industry-sponsored contests to challenge yourself in applying theoretical knowledge into real-life business problems.

Our graduates are managers, engineers, consultants and analysts who take up supervisory and managerial roles in various industries including:

➤ **Banking and finance**
Citibank, Goldman Sachs, HSBC, …

➤ **E-Commerce**
Alibaba, Amazon, …

➤ **Information technology**
Apple Inc., Cisco, IBM, …

➤ **Travel and leisure**
Cathay Pacific, Swire, …

➤ **Consulting firms**
Accenture, McKinsey, TQM Consultants, …

➤ **Health-care**
Johnson & Johnson, Walgreens Boots Alliance, …